OEM GNSS Antenna HX-CSX334A

Manufacturer: Shanghai EFIX Geomatics Co., Ltd.
Address: Room 1137, Area D, 11th Floor, Building 1, No. 158, Shuanglian Road, Qingpu District, Shanghai

HX-CSX334A is an embedded multi-constellation multi-frequency GNSS antenna that covers GPS, GLONASS, BDS, and GALILEO and is also compatible with 4G. It can be widely used in geodetic surveying, marine surveying, channel surveying, dredging surveying, seismic monitoring, bridge deformation monitoring, landslide monitoring, port container operations, and other occasions.

GREAT COMPATIBILITY FOR SOLID RELIABILITY

This versatile antenna adopts a compact design that combines GNSS antenna, 4G antennas antenna, delivering great compatibility to be integrated into RTK applications. The layout of this multifunction antenna is specifically designed for realizing a perfect isolation effect among the different antennas embedded and ensuring outstanding reduction of interrelated influence.

STABLE PHASE CENTER FOR REMARKABLE PERFORMANCE

It features multi-point feeding capability, guaranteeing a reliable phase center for millimeter positioning accuracy. The BT antenna is placed around the GNSS, ensuring good structural symmetry, and ensuring the consistency of the positioning antenna's phase center.

KEY FEATURES

- Supports GPS, GLONASS, Galileo, BeiDou, QZSS, IRNSS and L-band correction service
- Supports Dual 4G
- Strong anti-Interference performance
- Powerful system compatibility, easy for machine integration

TRACKING IN COMPLEX ENVIRONMENTS

This antenna exhibits superior high gain performance with ultralow signal loss, ensuring reliable satellite signal tracking. It also delivers wide beam width that covers wide frequencies with high marginal gain. These features in turn ensure the antenna a robust signal availability even in low elevation, making the antenna a perfect option in complex environments that have blockage, such as tree canopy and buildings.

RELIABLE AND ROBUST STRUCTURE

Utilizing self-developed air-spaced technology and low consumption microwave materials, GNSS antenna substrate is molded integrally through a mold, resulting in lower loss, lighter weight, smaller antenna dimensions, higher precision, good consistency, and more stable and reliable electrical performance.

STRONG ANTI-INTERFERENCE PERFORMANCE

The advanced LNA (Low Noise Amplifier) excels in improved signal filtering and out-of-band rejection and restraints unwanted electromagnetic interferences, plus strong multi-path reduction capacity over all GNSS frequency bands, providing strong anti-interference performance for consistent and reliable GNSS signals, even under complicated environments such as power grids, communication base stations, and broadcast stations.

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Specifications

PERFORMANCE	
Frequency	GPS L1/L2/L5 BDS B1/B2/B3 GLONASS L1/L2/L3 GALILEO E1/E5a/E5b/E6 QZSS L1/L2/L5 IRNSS L5 SBAS L1/L5 L-Band 4G
Nominal Impedance	50 Ω
Polarization	RHCP
Axial Ratio	≤3dB
Azimuth Coverage	360°
Azimuth Coverage	GNSS: ≤2.0
Peak Gain	GNSS:5dBi
Phase Center Deviation	±2mm

LOW NOISE AMPLIFIER	
LNA Gain	35±2dB
Noise Figure	L2 frequency band≤2dB; L1 frequency band≤2.5dB
VSWR	≤2.0
Passband Ripple	±2dB
Passband Ripple	+3.3 ~ +12VDC
Operation Current	≤45mA
Group Delay Ripple	≤5ns

MECHANICAL	
Dimensions	152.2*152.2*36.7 mm
Connector	I-PEX

ENVIRONMENT	
Operating Temperature	-40℃ ~ +85℃
Storage Temperature	-55℃ ~ +85℃
Humidity	95% non-condensing

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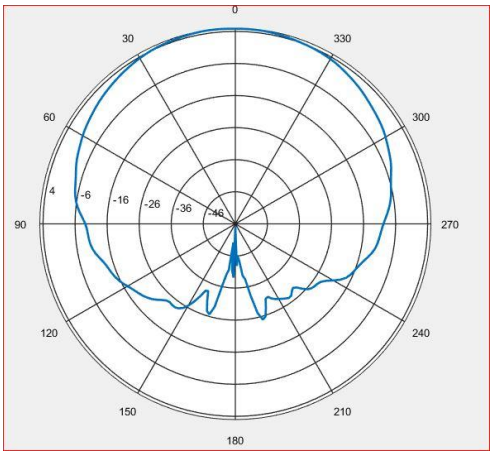
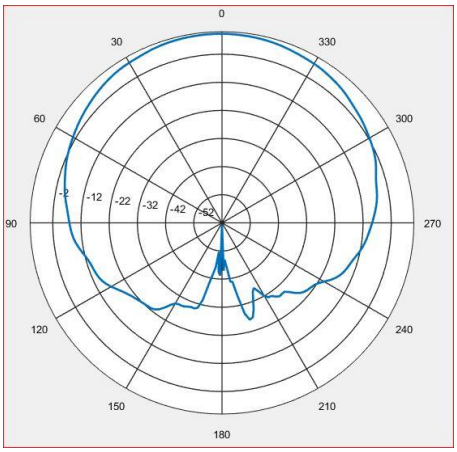
GNSS Antenna Performance

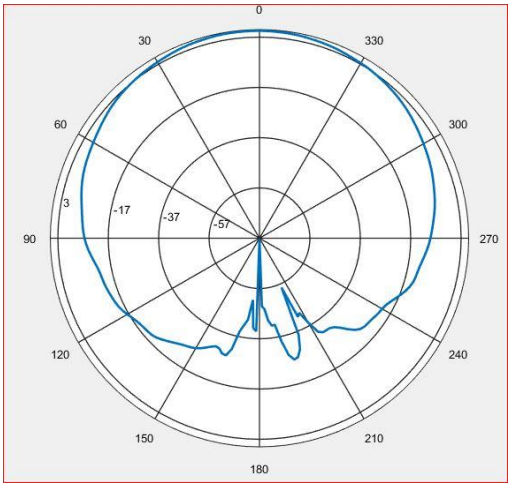
Frequency (MHz)	1176	1205	1227	1268	1542	1559	1575	1606
Gain (dBi)	5.04	5.39	5.64	5.42	4.60	4.71	5.09	5.21



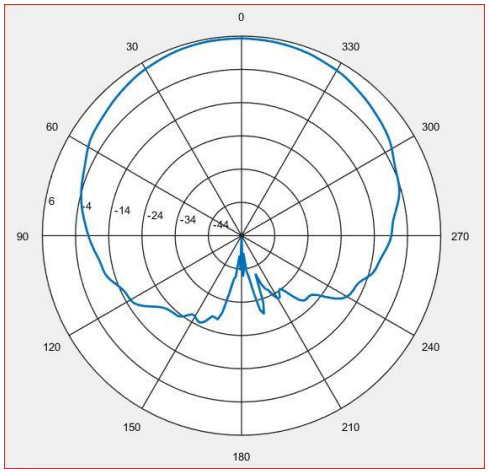
1176 MHz



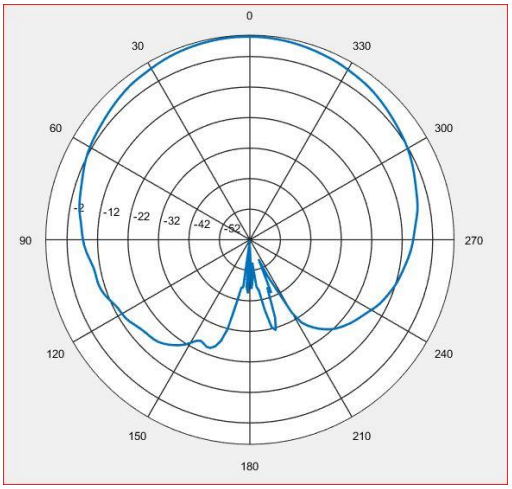
1205 MHz



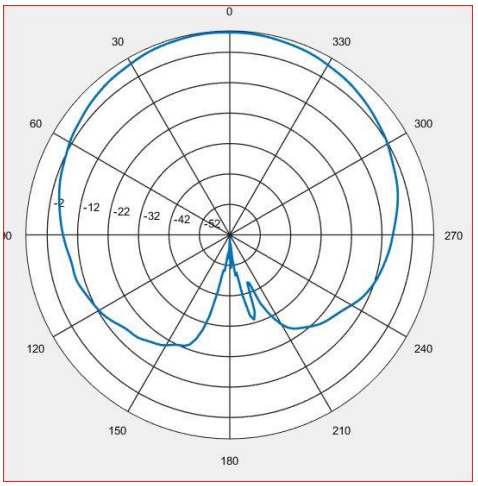
1227 MHz



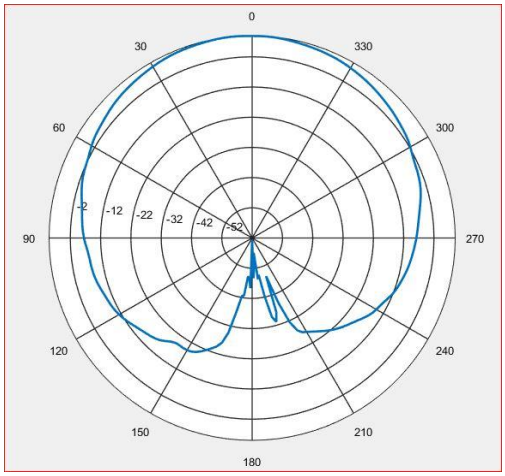
1268 MHz



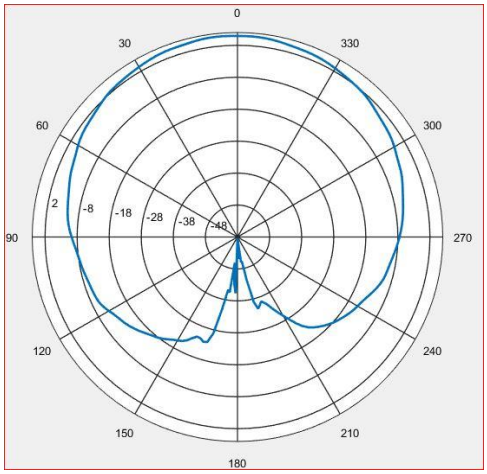
1542 MHz



1559 MHz



1575 MHz

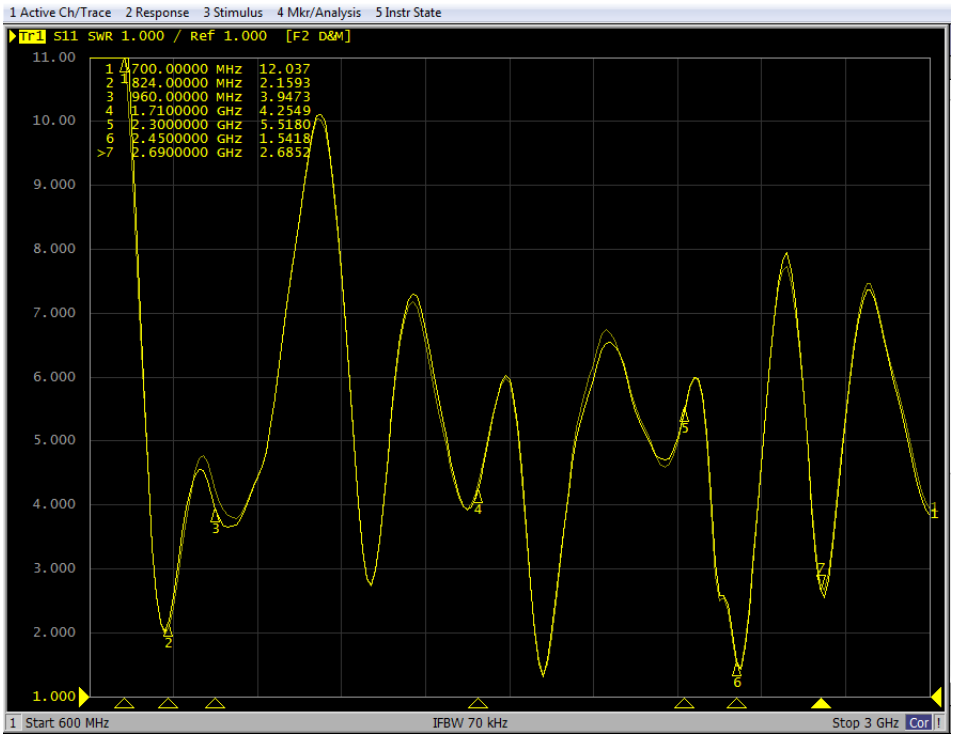


1606 MHz

4G-1 Antenna Performance

4G Antenna Performance

Frequency（MHz）	680	750	820	890	960	1710	1810	1910	2010	2110	2210	2310	2410	2510	2610	2690
Gain（dBi）	-4.87	-1.53	0.72	-4.00	-6.75	-0.31	3.01	2.42	2.13	1.64	0.38	0.85	0.49	-0.95	-0.07	2.41



4G Antenna VSWR

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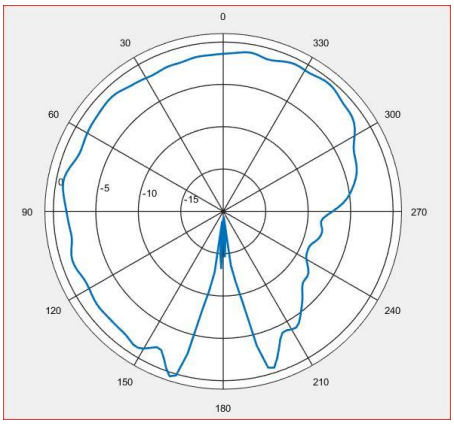
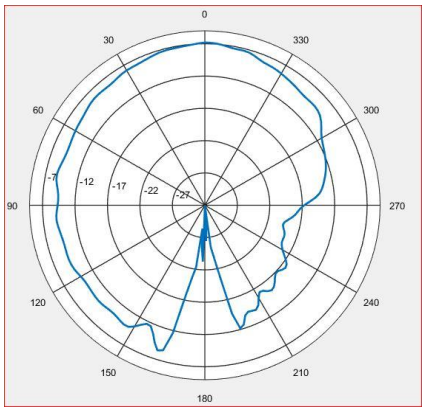
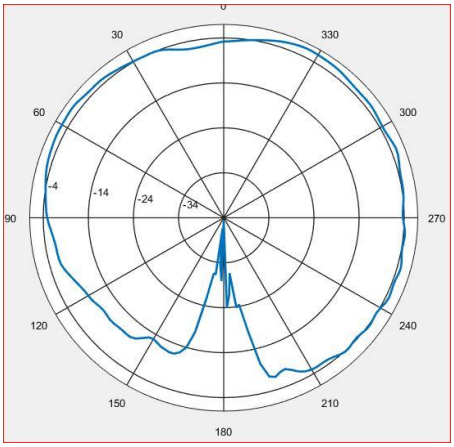


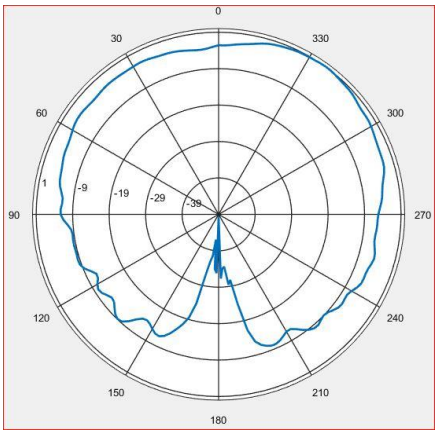
820 MHz



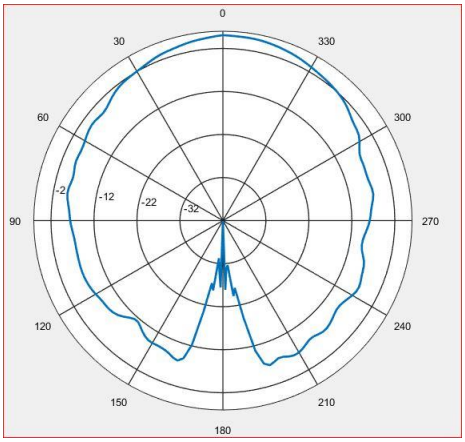
960 MHz



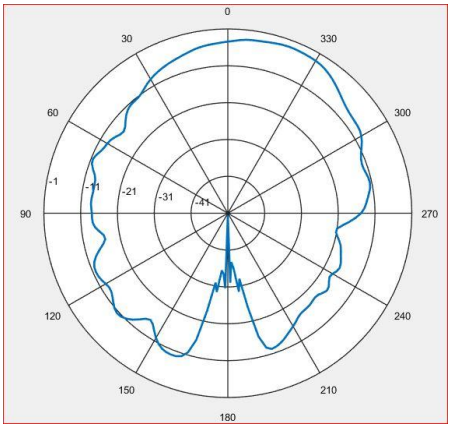
1710MHz



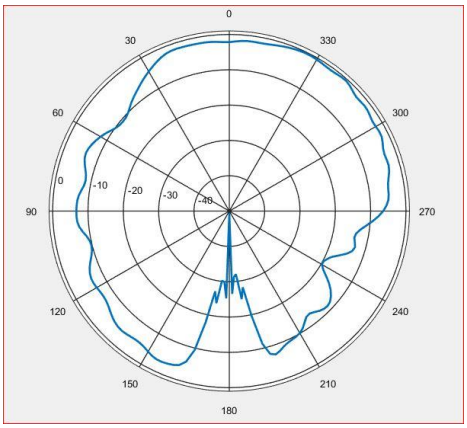
1910 MHz



2110 MHz



2510 MHz

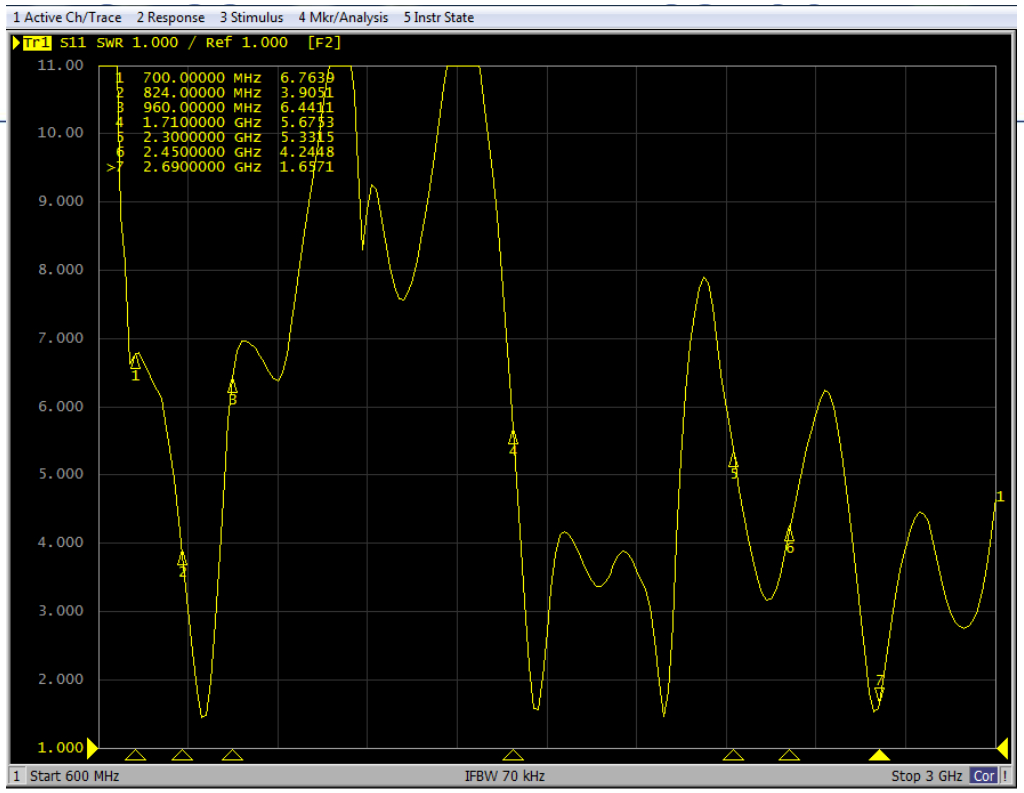


2690 MHz

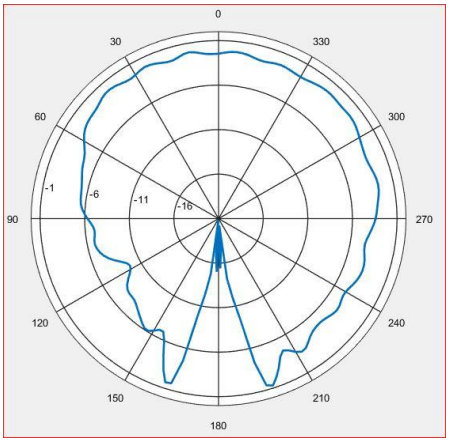
4G-2 Antenna Performance

4G Antenna Performance

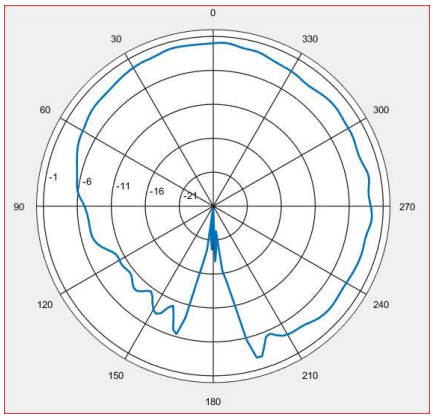
Frequency（MHz）	680	750	820	890	960	1710	1810	1910	2010	2110	2210	2310	2410	2510	2610	2690
Gain（dBi）	-3.80	-2.75	-0.82	0.25	-1.69	-3.19	3.29	0.38	1.42	2.69	-3.32	-1.73	1.17	0.58	1.60	4.45



4G Antenna VSWR



820 MHz



960 MHz

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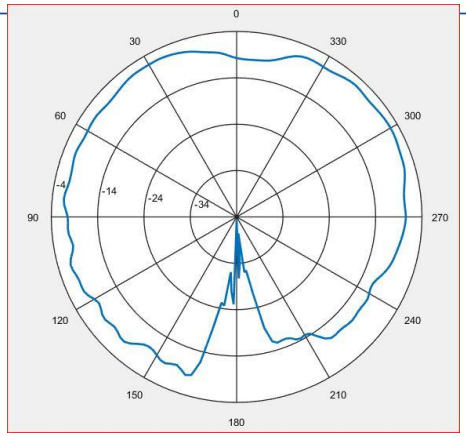
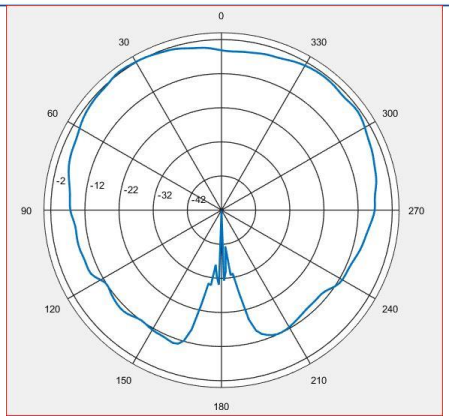
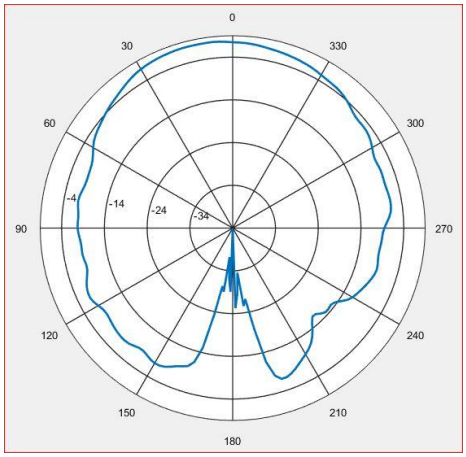


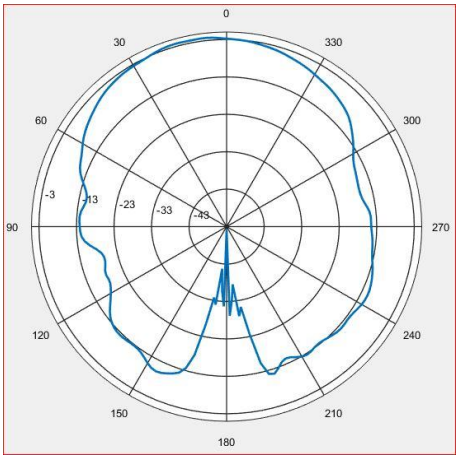
1710MHz



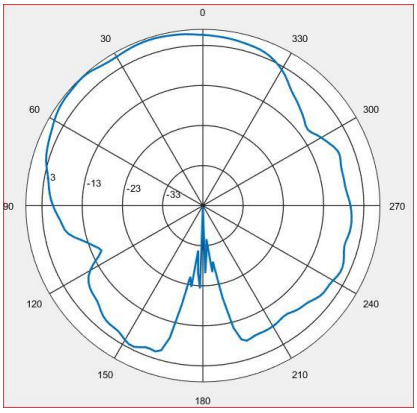
1910 MHz



2110 MHz



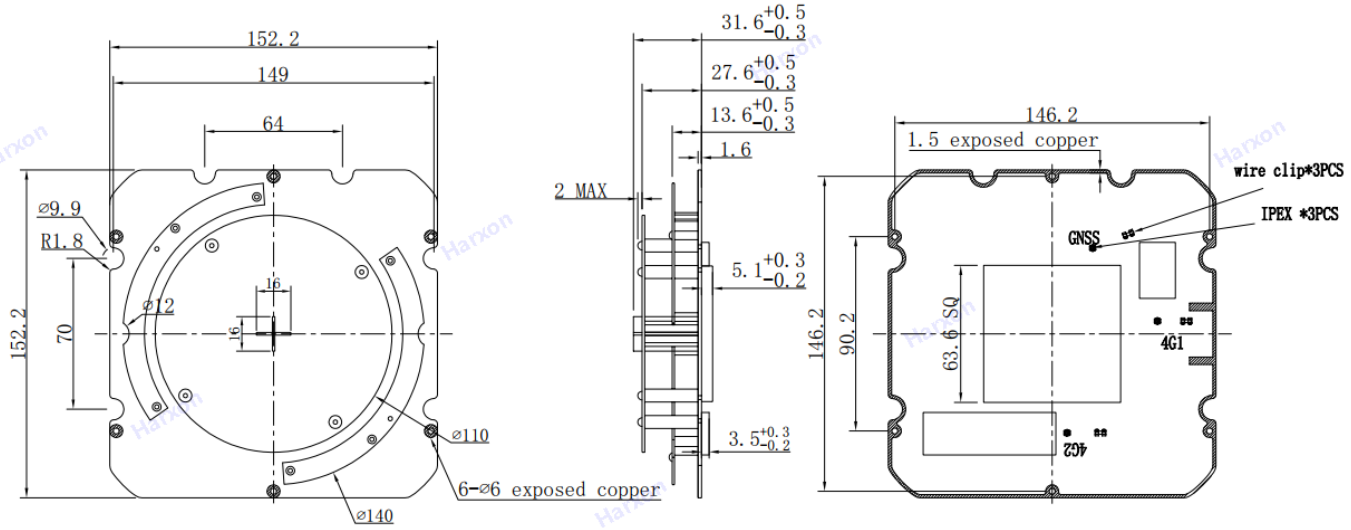
2510 MHz



2690 MHz

OEM GNSS Antenna HX-CSX334A

Structure & Phase Center Drawing (mm)



TOP VIEW SIDE VIEW BOTTOM VIEW

Undeclared Tolerance:±0.3mm